

REMARKS

Claims 8–11, 16–19, 24–27, 32–35 and 40 are pending in this application. By this Amendment, claim 8 is amended to incorporate the subject matter of claim 41 and is supported by page 22, lines 7-12 and page 23, lines 9-14 of the specification. Claim 41 is canceled. No new matter is added by this Amendment.

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Rodgers in the February 28, 2008 interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks. Specifically, claim 8 is amended to comply with the Examiner's helpful suggestions made during the interview.

I. Rejection Under 35 U.S.C. §103(a)

Claims 8-11, 16-19, 24-27, 32-35 and 40 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,372,609 ("Aga"). This rejection is respectfully traversed.

In the May 31, 2007 interview, Examiner Rodgers suggested amending claim 8 to incorporate a range of time for the heat treatment of the buried oxide film.

As such, Applicants have amended claim 8 to recite a process for producing an SOI wafer having a buried oxide film with a thickness of 100 nm or less by:

- (1) forming an oxide film having a total thickness of 100 nm or more,
- (2) bonding a bond wafer and a base wafer together,
- (3) forming the bond wafer into a thin film, and
- (4) heat treating the buried oxide film for four hours or more until the thickness of the buried oxide film is reduced by 20 nm or more.

Aga does not disclose heat treatment of a buried oxide film for four hours or more until the thickness of the buried oxide film is reduced by 20 nm or more. Specifically, Aga discloses a method comprising forming an oxide film having a thickness of about 100-2000

nm on the surface of a bonded wafer (*see* Aga, col. 5, lines 57-60) and further subjecting the bonded wafer to heat treatment performed in an inert gas atmosphere at a temperature of 1000-1300 °C for 30 minutes to 2 hours (*see* Aga, col. 6, lines 31-33). Aga does not provide any reason or rationale for one of ordinary skill in the art to have increased heat treatment time from 2 hours to 4 hours.

Furthermore, Aga discloses that the SOI wafer was subjected to "an oxygen atmosphere containing water vapor at 900 °C for 150 minutes [2.5 hours] to form the thermal oxide film" (emphasis added). *See* Aga, col. 10, lines 36-37. Aga thus describes forming a thermal oxide film, not reducing the thickness of a buried oxide film as in claim 8. Aga thus describes a different process with different heat requirements, and as such clearly would not have provided one of ordinary skill in the art with any reason or rationale to have used a heat treatment of 4 hours or more to reduce the thickness of a buried oxide film by 20 nm or more.

For all the foregoing reasons, producing an SOI wafer according to the recited method of claim 8 is clearly different from the method of Aga. Specifically, Aga does not teach or suggest all of the features recited in claim 8 (i.e., heat treatment of a buried oxide film for 4 hours or more). Thus, Aga would not have rendered the features recited in claim 8 obvious to one of ordinary skill in the art and would not have provided one of ordinary skill in the art with a reason or rationale to have used a heat treatment for four hours or more to reduce the thickness of a buried oxide film by 20 nm or more.

For all of the foregoing reasons, and all the reasons set forth in the February 13, 2008, Amendment, reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a) are respectfully requested.

II. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 8–11, 16–19, 24–27, 32–35 and 40 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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